

**IAP5 Rec'd PCT/PTO 28 JUL 2006**

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Iwao YAMAZAKI

Attorney Docket No. 04173.0519

**10/587865**

**TRANSLATION OF THE ANNEXES TO THE  
PRELIMINARY EXAMINATION REPORT  
(ARTICLE 34 AMENDMENTS)**

**Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450**

Sir:

**REQUEST FOR SUBSTITUTION OF REPLACEMENT SHEETS**

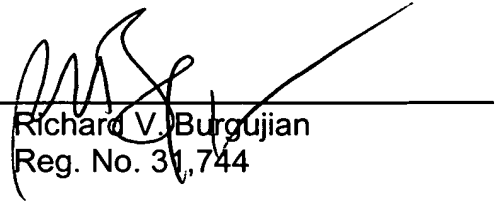
Please substitute the attached (4) replacement sheets 2, 4, 6, and 8 of the translation of the Article 34 Amendments for substitution sheets pages 2, 3, 4, 6, and 8 of the specification in the enclosed translation of the as-filed PCT application and (5) replacement sheets 35-39 of the claims containing the translation of the Article 34 Amendments for replacement sheets 35-39 of the claims. It is respectfully requested that the specification and claims in the substitute sheets be examined during examination of the patent application. Claims 1-20 are currently pending.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: July 28, 2006

By: \_\_\_\_\_

  
Richard V. Burgujian  
Reg. No. 31,744

RVB/FPD/rac

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of the cable.

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Patent Document 1: JP-A 2002-292912 (KOKAI)

## DISCLOSURE OF THE INVENTION

- 5 [0005] The present invention is established so as to iron out the above-mentioned problem, and thus, it is an object of the present invention to provide an electrode and device for various treatments through the enhancement of the handling performance.
- [0006] In order to achieve the object, this invention relates  
10 to an electrode for treatment [~~including~~], wherein in treatment use, a plurality of treatment electrodes are prepared so that each treatment electrode receives a control signal for control transmitted from a controller, comprising: an electric power source; a conducting pad for attaching a human body; a treatment  
15 current supplying means for supplying a pulsed current to a body part to which the conducting pad is attached on the electric power supply from the electric power source; a receiving means for receiving [an external] a control signal proper for the treatment electrode transmitted from the controller at radio transmission;  
20 and a controlling means for controlling the operation of the treatment electrode through the treatment current supplying means on the basis of the control signal received by the receiving means at radio transmission. According to the present invention, since the pulsed current can be supplied to the human body under the  
25 cordless condition, the operability for parts and instruments a user should handle can be developed remarkably at treatment and thus, the user can realize the intended treatment such as slimming treatment easily.

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the water content of the body part can be obtained.

[0010] In the treatment electrode according to the present invention, an impedance information transmitting means for transmitting a measurement result in impedance by the impedance measuring means ~~[outside]~~ to the controller at radio transmission may be provided so that the receiving means receives, as the control signal, treatment controlling information corresponding to at least one selected from the group consisting of the body fat, the muscle bulk, the bone mass and ~~[/or]~~ the water content of the body part which are calculated from the measured impedances at the controller. In the treatment electrode according to the present invention, the controlling means varies the output and/or frequency of the pulsed current to be supplied to the human body by the treatment current supplying means on, as the control signal, the treatment controlling information corresponding to the body fat, the muscle bulk, the bone mass and/or the water content of the body part. In this case, the optimum treatment can be conducted for the body part about which the body fat or the like is known on the measured body fat or the like.

[0011] In the treatment electrode according to the present invention, the controlling means varies the width of the pulsed current commensurate with the degree of the body fat of the body part which is calculated. In this case, the response period of muscle against electric stimulation is longer at a body part with higher body fat and shorter at a body part with lower body fat. In this point of view, the pulsed current with longer pulse width is supplied to the body part with more body fat and the pulsed current with shorter pulse width is supplied to the body part with

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treatment can be simplified.

[0015] In the treatment electrode according to the present invention, a number of heart beat detecting means for detecting the number of heart beat through the conducting pad to be contacted to the body part may be provided. In this case, the treatment mode can be varied on the detected number of heart beat.

[0016] In order to achieve the object, this invention relates to a device for treatment comprises a treatment electrode, and a controller for controlling the treatment electrode, and the controller includes an input means for inputting information about the treatment, a control signal generating means for generating a control signal on the information input by the input means, and a control signal transmitting means for transmitting the control signal generated by the control signal generating means to the treatment electrode at radio transmission.

[0017] In the treatment device according to the present invention, when a given treatment information such as treatment mode is input into the device via the controller, the control signal corresponding to the treatment information is transmitted at radio transmission. At the treatment electrode, the pulsed current supply corresponding to the control signal received at radio transmission is conducted to at least one pair of conducting pads to be contacted to the body part. According to this aspect of the present invention, therefore, the handling of the treatment device can be simplified so that the intended treatment can be conducted easily. Herein, the treatment mode can be set by changing the output and/or the frequency of the pulsed current to be supplied from the pulsed current supplying section.

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substantially sandwiched between the conducting pads (e.g., the conducting pads of the treat electrode) without the shift of the conducting pads on the human body.

[0021] In the treatment device according to the present invention, the controller includes a selecting means which is configured so as to switchably select a pair of conducting pads or a pair of treatment electrodes for measuring an impedance of the body part through an impedance measuring means from among three or more conducting pads or treatment electrodes. In this case, the intended treatment can be conducted to the body part substantially sandwiched between the conducting pads (e.g., the conducting pads of the treat electrode) without the shift of the conducting pads on the human body, and the impedance of the body part sandwiched by the conducting pads can be obtained.

[0022] In the treatment device according to the present invention, the treatment electrode further includes an impedance measuring means for measuring the impedance of the body part to which the conducting pad is attached by flowing a measuring current in the body part, and the controller further includes: an impedance information receiving means for receiving, at radio transmission, an impedance measurement result of the body part which is measured by the impedance measuring means from the treatment electrode; a calculating means for calculating at least one selected from the group consisting of the body fat, the muscle bulk, the bone mass and~~[/ex]~~ the water content of the body part on the measured impedance received by the impedance information receiving means; a control signal generating means for generating treatment information as a control signal on the calculated result

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WHAT IS CLAIMED IS:

1. (Amended) An electrode for treatment, wherein in treatment use, a plurality of treatment electrodes are prepared  
5 so that each treatment electrode receives a control signal for control transmitted from a controller, comprising:

an electric power source;

a conducting pad for attaching a human body;

10 a treatment current supplying means for supplying a pulsed current to a body part to which said conducting pad is attached on the electric power supply from said electric power source;

a receiving means for receiving [~~an external~~] a control signal proper for said treatment electrode transmitted from said controller at radio transmission; and

15 a controlling means for controlling the operation of said treatment electrode through said treatment current supplying means on the basis of said control signal received by said receiving means at radio transmission.

2. The treatment electrode according to claim 1, wherein  
20 said treatment current supplying means is configured so as to stop the supply of said pulsed current at a given period.

3. The treatment electrode according to claim 1, wherein said conducting pad is comprised of a plurality of conducting pads.

25 4. The treatment electrode according to claim 3, further comprising a conducting pad connector for electrically and mechanically connecting said plurality of pads, wherein the length of said conducting pad connector is changeable.

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5. The treatment electrode according to claim 3, further comprising a conducting pad connector for electrically and mechanically connecting said plurality of pads, wherein said conducting pad connector is flexible.

5 6. The treatment electrode according to claim 1, further comprising an impedance measuring means for measuring the impedance of said body part to which said conducting pad is attached by flowing a measuring current in said body part.

7. (Amended) The treatment electrode according to claim  
10 6, further comprising an impedance information transmitting means for transmitting a measurement result in impedance by said impedance measuring means ~~[outside]~~ to the controller at radio transmission, wherein said receiving means receives, as said control signal, treatment controlling information corresponding  
15 to at least one selected from the group consisting of the body fat, the muscle bulk, the bone mass and~~[or]~~ the water content of said body part which are calculated from the measured impedances at said controller.

8. The treatment electrode according to claim 7, wherein  
20 said controlling means varies the output and/or frequency of said pulsed current to be supplied to said human body by said treatment current supplying means on, as said control signal, said treatment controlling information corresponding to the body fat, the muscle bulk, the bone mass and/or the water content of said body part.

25 9. The treatment electrode according to claim 8, wherein said controlling means varies the width of said pulsed current commensurate with the degree of the body fat of said body part which is calculated.

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10. The treatment electrode according to claim 1, further comprising a pad adhering means for adhering said conducting pad to said human body.

11. The treatment electrode according to claim 10, wherein  
5 said pad adhering means is configured such that said conducting pad is made of an adhesive sheet with electric conduction.

12. The treatment electrode according to claim 1, wherein said conducting pad is comprised of a plurality of conducting pads commensurate with different kinds of shapes of said body part.

10 13. The treatment electrode according to claim 12, further comprising a clothing with said plurality of conducting pads which are fixed so as to be contacted to said body part at treatment.

14. The treatment electrode according to claim 1, further comprising a number of heart beat detecting means for detecting  
15 the number of heart beat through said conducting pad to be contacted to said body part.

15. (Amended) A device for treatment, comprising:  
a treatment electrode as defined in claim 1; and  
a controller for controlling said treatment electrode,  
20 said controller including:

an input means for inputting information about said treatment;

a control signal generating means for generating a control signal on said information input by said input means; and

25 a control signal transmitting means for transmitting said control signal generated by said control signal generating means to said treatment electrode at radio transmission.

16. The treatment device according to claim 15, further



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comprising a plurality of conducting pads.

17. The treatment device according to claim 15, wherein said controller further includes a pulsed current supply selecting means which is configured so as to switchably select  
5 a pair of conducting pads or a pair of treatment electrodes for supplying a pulsed current through a treatment current supplying means from among three or more conducting pads or treatment electrodes.

18. The treatment device according to claim 15, wherein  
10 said pulsed current supply selecting means is configured so as to switchably and successively select said pair of conducting pads or said pair of treatment electrodes so that said pulsed current is supplied successively through the successively selected pair of conducting pads or treatment electrodes.

15 19. The treatment device according to claim 15, wherein said treatment electrode includes an impedance measuring means for measuring the impedance of said body part to which said conducting pad is attached by flowing a measuring current in said body part, and said controller includes a selecting means which  
20 is configured so as to switchably select a pair of conducting pads or a pair of treatment electrodes for measuring an impedance of said body part through an impedance measuring means from among three or more conducting pads or treatment electrodes.

20. (Amended) The treatment device according to claim 15,  
25 wherein said treatment electrode further includes an impedance measuring means for measuring the impedance of said body part to which said conducting pad is attached by flowing a measuring current in said body part, and

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said controller further includes:

an impedance information receiving means for receiving, at radio transmission, an impedance measurement result of said body part which is measured by said impedance measuring means from said treatment electrode;

a calculating means for calculating at least one selected from the group consisting of the body fat, the muscle bulk, the bone mass and~~[/or]~~ the water content of said body part on the measured impedance received by said impedance information receiving means;

a control signal generating means for generating treatment information as a control signal on the calculated result by said calculating means; and

a control signal transmitting means for transmitting, at radio transmission, said control signal generated by said control signal generating means.